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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,019	03/24/2005	Karl D Brommer	200/20029-US	8890
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Vern Maine & Associates P. O. BOX 3445 NASHUA, NH 03061			EXAMINER	
			BALAOING, ARIEL A	
			ART UNIT	PAPER NUMBER
			2617	
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			11/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,019

Applicant(s)

BROMMER, KARL D

Examiner

ARIEL BALAOING

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 24 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continuation-in-Part

When applicant files a continuation-in-part whose claims are not supported by the parent application, the effective filing date is the filing date of the child CIP. Any prior art disclosing the invention or an obvious variant thereof having a critical reference date more than 1 year prior to the filing date of the child will bar the issuance of a patent under 35 U.S.C. 102(b). *Paperless Accounting v. Bay Area Rapid Transit System*, 804 F.2d 659, 665, 231 USPQ 649, 653 (Fed. Cir. 1986). See MPEP 2133.01.

Support for Claims 1-16 of the instant application are not found in the parent application (10/125,241).

Election/Restrictions

1. Applicant's election without traverse of Group 1, claims 1-16 in the reply filed on 11/18/2008 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 12 recites the limitation "each of the requesting-to-send modems" in line 8 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claims 13-16 are rejected for being dependent on an indefinite claim

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1, 3, 4, 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over SCHIELTZ (US 5,659,787) in view of BENVENISTE (US 2002/0163933 A1).

Regarding claim 1, SCHIELTZ discloses a method for polling and scheduling in a multiuser network (abstract) that includes a plurality of bandwidth efficient modems, with at least one modem designated as a polling point coordinator access point (AP) element, the method comprising: simultaneously transmitting a first set of polling signals, where each polling signal corresponds to a particular terminal included in a first set of terminals included in the network (abstract; col. 4, line 17-37; col. 11, line 17-34; group polling to specified group); receiving two or more simultaneous responses from the first set of polled terminals (col. 11, line 18-45; two or more devices responding to the poll); and recovering each of those two or more simultaneous responses using co-channel demodulation capabilities of an AP element (col. 11, line 18-45; a demodulation of some form must take place to determine simultaneous response of determined devices). However, SCHIELTZ does not expressly disclose indicating the beginning of

a contention-free period; transmitting on a single channel a first set of polling signals; and transmitting clear-to-send messages to any terminals requesting to send data, as indicated by received responses. In a similar field of endeavor, BENVENISTE discloses indicating the beginning of a contention-free period (paragraph 54, 55); transmitting on a single channel (paragraph 37, 38, 57; shared channel); and transmitting clear-to-send messages to any terminals requesting to send data, as indicated by received responses (paragraph 41-43; clear to send in response to request to send). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify SCHIELTZ to include the teachings of BENVENISTE, since the use of indication of a contention free period and provisioning of a clear to send used in a shared channel system are conventional to the art of polling and allows a networked system to provide collision avoidance based on various network determinations.

Regarding claim 3, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. SCHIELTZ further discloses wherein the recovering is followed by: simultaneously transmitting a next set of polling signals to a next set of two or more terminals (col. 11, line 46-61); receiving two or more simultaneous responses from the next set of polled terminals (col. 11, line 46-61); and recovering each of those two or more simultaneous responses using co-channel demodulation capabilities of the AP element (col. 11, line 46-61; repetition of the steps of claim 1 applied to a second group).

Regarding claim 4, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. SCHIELTZ further discloses further comprising:

repeating the steps of simultaneously transmitting a next set, receiving two or more simultaneous responses from the next set of polled terminals, and recovering each of those two or more simultaneous responses using co-channel demodulation capabilities of the AP element until the end of the contention free period (col. 11, line 46-61; repetition of the steps of claim 1 applied to a second group).

Regarding claim 6, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE further discloses wherein indicating the beginning of a contention-free period includes transmitting a beacon signal (BENVENISTE – paragraph 57; figure 1A; when using beacon management frames of a point coordination function, beacon frames are used to determine beginning and of contention-free periods).

Regarding claim 7, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of SCHIELTZ and BENVENISTE does not expressly disclose wherein the polling signals are generated by the AP element using an optimal phase relationship to facilitate signal recovery. However, the examiner takes Official Notice that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an optimal phase relationship to a generated signal, since the use of optimal phase is known in the art to reduce channel interference.

Regarding claim 8, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE

further discloses wherein the responses include at least one of an acknowledgement signal and a request-to-send signal (BENVENISTE - paragraph 41-43).

Regarding claim 9, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE further discloses wherein transmitting clear-to-send messages to any terminals requesting to send data enables those terminals to simultaneously transmit messages to other terminals in the network after a guard interval (BENVENISTE – paragraph 28).

Regarding claim 10, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE further discloses further comprising: transmitting a message to signal the end of the contention free period (BENVENISTE – paragraph 54, 120).

3. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over SCHIELTZ (US 5,659,787) in view of BENVENISTE (US 2002/0163933 A1), and further in view of HODZIC et al (US 6,097,707).

Regarding claim 2, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE further discloses transmitting acknowledgement signals to responding terminals, however, the combination of SCHIELTZ and BENVENISTE does not expressly disclose simultaneously transmitting acknowledgement signals. In a similar field of endeavor, HODZIC discloses simultaneously transmitting acknowledgement signals to responding terminals (abstract; col. 4, line 66-col. 5, line 5). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the

combination of SCHIELTZ and BENVENISTE to include the teachings of HODZIC, since HODZIC states that such a modification would provide more efficient allocation of bandwidth when using a shared resource (see col. 4, line 15-27).

Regarding claim 5, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE further discloses wherein simultaneously transmitting a next set of polling signals is preceded by acknowledgement signals to responding terminals (BENVENISTE - paragraph 42, 53, 55). However, the combination of SCHIELTZ and BENVENISTE does not expressly disclose wherein the acknowledgement signals are transmitted simultaneously. In a similar field of endeavor, HODZIC discloses simultaneously transmitting acknowledgement signals to responding terminals (abstract; col. 4, line 66- col. 5, line 5). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of SCHIELTZ and BENVENISTE to include the teachings of HODZIC, since HODZIC states that such a modification would provide more efficient allocation of bandwidth when using a shared resource (see col. 4, line 15-27).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over SCHIELTZ (US 5,659,787) in view of BENVENISTE (US 2002/0163933 A1), and further in view of HOLMQUIST et al (US 6,414,964 B1).

Regarding claim 11, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of SCHIELTZ and BENVENISTE further discloses further comprising: monitoring the channel (BENVENISTE - paragraph

41-43); transmitting clear-to-send messages to queued terminals when currently transmitting terminals complete data transmission (BENVENISTE - paragraph 41-43); simultaneously transmitting on a single channel a next set of polling signals (SCHIELTZ - col. 11, line 46-61). However the combination of SCHIELTZ and BENVENISTE does not expressly disclose wherein a next polling occurs in response to no terminals being queued. In the same field of endeavor, HOLMQUIST discloses wherein a next polling occurs in response to no terminals being queued (abstract; col. 8, line 32-59).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of SCHIELTZ and BENVENISTE to include the teachings of HOLMQUIST, since such a modification would allow a system to administer a threshold time limit for devices to indicate a request to transfer data.

5. Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over BENVENISTE (US 2002/0163933 A1) in view of SUGAR et al (US 2002/0061031 A1).

Regarding claim 12, BENVENISTE discloses a method for polling and scheduling in a multiuser network that includes a plurality of bandwidth efficient modems configured to carry out a distributed coordination function (DCF) for providing best-effort delivery of asynchronous packet data (abstract), the method comprising: two or more terminals transmitting on a single channel requests-to-send (RTS) messages to a first set of destination modems (abstract; paragraph 23, 24, 121, 144); receiving clear-to-send (CTS) messages from the first set of destination modems at each of the requesting-to-send modems (paragraph 23, 24, 121; BENEVENSTE discloses a conventional DCF

system for contention based access using requests-to-send and a clear-to-send for determining a quality of service); recovering each corresponding CTS message using co-channel demodulation capabilities of the corresponding requesting modem (paragraph 230-233; CTS inherently require demodulation in order to determine when to transmit data); each requesting modem transmitting its respective data on to the network (paragraph 230-233); and each corresponding destination modem recovering the corresponding data using its co-channel demodulation capabilities (paragraph 230-233; destination terminals would inherently need to demodulate a received signal). However, BENVENISTE does not expressly disclose simultaneously receiving and transmitting messages. In a similar field of endeavor, SUGAR et al discloses simultaneously receiving and transmitting messages (abstract; figure 6-8; paragraph 51-53; interference mitigation of overlapping protocols). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify BENVENISTE to include the teachings of SUGAR, since SUGAR states that such a modification would provide increased throughput of information carried by networks using differing protocols.

Regarding claim 16, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of BENVENISTE and SUGAR further discloses further comprising: repeating the steps of simultaneously transmitting requests-to-send (RTS) messages, simultaneously receiving clear-to-send (CTS) messages, recovering each corresponding CTS message, simultaneously transmitting respective data on to the network, and recovering the corresponding data for one or

more next sets of destination modems (abstract; paragraph 23, 24, 121, 144; polling described in BENVENISTE occurs periodically and therefore would repeat the same steps as disclosed in claim 12).

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over BENVENISTE (US 2002/0163933 A1) in view of SUGAR et al (US 2002/0061031 A1) as applied to claim 12 above, and further in view of OGIER et al (US 2003/0179742 A1).

Regarding claim 14, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of BENVENISTE and SUGAR does not expressly disclose comprising: each modem adaptively learning modes of operation which each particular modem in the network is capable; and storing the learned modes operation. In the same field of endeavor, OGIER discloses each modem (**node**) adaptively learning modes of operation which each particular modem in a network is capable (abstract; paragraph 399, 512); and storing the learned modes operation (abstract; paragraph 399, 512; node capabilities). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of BENVENISTE and SUGAR to include the teachings of OGIER, since such a modification would improve efficiency of a system by adaptively detecting changes in node capabilities within a network topology.

Allowable Subject Matter

7. Claims 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JANDRELL (US 5,365,516) – Method for determining location of a transponder

GOLDBERG (US 5,530,437) – Simulcast response from a plurality of portable units

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARIEL BALAOING whose telephone number is (571)272-7317. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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